

## Mortality in Bengal in 1943.

A survey is being carried out at present in Bengal on the random sample principle in the areas affected by food shortage of 1943. About 7,000 family schedules were collected by the 2nd December 1944, and tabulation of the material is proceeding. Preliminary results are given in this note purely for purposes of illustration to give some idea of the nature of the material under examination.

2. The Government of Bengal had grouped the different sub-divisions of Bengal in four classes : Class (I) consisting of 12 sub-divisions which were considered to be most affected by the food shortage; Class (II) consisting of 26 sub-divisions which were less affected; Class (III) consisting of 6 sub-divisions as least affected; and finally Class (IV) consisting of 43 sub-divisions which were considered as not appreciably affected by the food shortage.

3. By the middle of November results had been tabulated for 13652 individuals in 2632 families which were surveyed in 72 villages from 7 sub-divisions of which 3 belonged to Class (I). 3 to Class (II) and 1 to Class (III). Based on this material the weighted average death rates from January to December 1943 comes out as 5.0 per cent for males and 5.6 per cent for females. The Bengal Life Table of 1931 gives an average death rate of 4.0 per cent for both males and females. The excess death rate in 1943 thus comes out as 1.0 per cent for males and 1.6 per cent for females. This would give the total excess deaths as roughly 0.78 millions or say something between 7 and 8 lakhs.

4. A more detailed calculation is also possible. Table (1) gives the number of deaths by age and sex in which col. (1) gives the different age groups, cols.(2), (3) and (4) the number of males, females and total persons living at the beginning of 1943. The number of deaths is shown in cols.(5) (6) and (7) for males, females and all persons respectively. The calculated death rates for males, females and all

persons are given in the next three cols.(8), (9) and (10). Death rates according to Bengal Life Table 1931 for males and females are given in cols.(11) and (12).

5. It will be noticed that the death rate in the lowest age group up to 5 years had apparently not been affected by the food shortage in the present sample. In all other age groups, death rates in 1943 were definitely higher for both males and females; and this excess was much greater in the higher age groups. It will be noticed that death rates were usually higher among females as compared to males except between 40 and 60 years of age.

6. Table (2) gives the death rates in individual sub-division. In this table col.(1) gives the class of the sub-division according to the Bengal Government classification, and col.(2) the name of the sub-division. The number of villages and families included in the present sample are shown in cols.(3) and (4) respectively. The total number of persons living at the beginning of 1943 are given in cols.(5), (6) and (7), and the number of deaths in cols.(8) (9) and (10) respectively. The calculated death rates for males and females are given in cols.(11) and (12).

7. It would be noticed that death rates apparently fluctuated a good deal from one sub-division to another. Secondly, results based on the present sample do not conform to the Bengal Government classification. For example, the death rate in Tangail sub-division in Class (II) was apparently higher than that in the two sub-divisions Diamond Harbour and Arambag in Class (I). The death rate in Kishoreganj in Class (III) was also higher than those in some of the sub-divisions in both Classes (I) and (II). These results certainly throw doubt on the validity of the classification made by the Government of Bengal. It also shows that it would not be advisable to leave out from the enquiry the sub-divisions placed in Class (IV) which were not considered to have been affected at all. Arrangements have therefore been made to survey some of the sub-divisions in Class (IV).

8. Table (3) shows the calculation of the estimated excess deaths in Bengal in 1943. Col.(1) gives the class of the sub-division according to Bengal Government classification, and col.(2) the total number of sub-divisions in each class. The number of sub-divisions, villages, and families included in the present sample are given in cols. (3), (4) and (5) respectively. Calculated average death rates for males and females based on the sample survey are given in cols.(6) and (7). The total population in lakhs according to the 1941 census are shown in cols.(8) and (9) for males and females respectively. Calculated total number of deaths are given for males and females in cols.(10) and (11) respectively. It would be noticed that the calculated total number of deaths among males in 1943 is 15.8 lakhs and among females 16.1 lakhs. From this we must subtract the "normal" number of deaths. Adopting the average death rate of 4 per cent (1931 Life Table) the total number of normal deaths would come to 12.7 lakhs for males and 11.4 lakhs for females. Subtracting these two figures from the calculated total deaths, we get estimated excess deaths of 3.1 lakhs for males and 4.7 lakhs for females, or a total of 7.8 lakhs altogether.

9. These figures are based on the population as in 1941. If the increase in population is taken into consideration (at the uniform census rate of growth between 1931 and 1941) the above figures would have to be increased by 3.31 per cent for males and 2.97 per cent for females; and corrected value of total excess deaths would come to about 8 lakhs in round number.

10. From general considerations it however seems likely that mortality rates are falling; but as Life Tables for the 1941 census were not prepared it is not possible to state ~~anything~~ anything definite in this regard. If the surmise of falling death rate is correct then the actual number of excess

excess deaths would be somewhat greater than 8 lakhs. Apart from this, as already noted, the present calculation is based on only a small fraction of the material already collected or expected to be collected in the present enquiry. The figures of 8 lakhs is thus purely provisional, and is being given here for purposes of illustration only.

Statistical Laboratory,  
Presidency College,  
Calcutta.  
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Table (1). Number of Deaths by Age and Sex (January - December 1943) based on Sample Enquiry.

Age.	Number of individuals						Percentage death.					
	Total living			Dead			Sample enquiry.			Life Table (1931)		
	Male.	Female.	Total	Male.	Female.	Total	Male.	Female.	Total	Male.	Female.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1-5	890	849	1739	91	90	181*	10.2	10.6	10.4	11.2	16.1	
5-10	1178	1095	2273	63	82	145	5.3	7.5	6.4	1.6	1.4	
10-15	813	664	1477	34	47	81	4.2	7.1	5.5	1.0	1.2	
15-20	690	802	1492	19	34	53	2.8	4.2	3.6	1.2	1.7	
20-30	1204	1248	2452	53	71	124	4.4	5.7	5.1	1.8	2.5	
30-40	962	834	1796	50	50	100	5.2	6.0	5.6	3.0	3.4	
40-50	650	562	1212	58	45	103	8.9	8.0	8.5	4.2	4.3	
50-60	400	330	730	54	43	97	13.5	13.0	13.3	5.5	5.0	
above	280	201	481	63	58	121	22.5	28.9	25.2	9.8	9.1	
Total	7067	6585	13652	485	520	1005	6.9	7.9	7.4	4.0	4.0	

\*This does not include infants less than 1 year.

Table (2). Number of Deaths in individual Sub-divisions.

Class.	Sub-division	Number of individuals							Percent dead		
		Total living			Dead				Total	Male.	Female.
		Villa	Femi	Total	Male.	Female.	male.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
I	1. Diamond Harbour	10	406	1060	1104	2164	61	59	120	5.8	5.3
	2. Tamluk	15	600	1641	1630	3271	208	225	433	12.7	13.8
	3. Arambagh	11	339	782	758	1540	20	12	32	2.6	1.6
Class I	Most affected	36	1345	3483	3492	6975	289	296	585	7.0	6.9
II	4. Hooghly, Sadar.	10	243	547	524	1071	12	11	23	2.2	2.1
	5. Kushtia.	8	284	784	648	1432	40	33	73	5.1	5.1
	6. Tangail.	10	365	1059	963	2022	69	106	175	6.5	11.0
Class II.	Less affected,	28	892	2390	2135	4525	121	150	271	4.6	6.1
III.	Kishoreganj (least affected)	8	385	1194	958	2152	75	74	149	6.3	7.7

Table (3). Estimated Deaths in Bengal 1945.

Bengal Revenue Department Classification.	Total No. of sub-division.	Number included in present sample			Percentage death		Population in lakhs (1941 Census)		Estimated deaths in lakhs		
		Sub-division.	Vill-ages.	Femi-ages.	Male.	Female.	Male.	Female.	Male.	Female.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
I	Most Affected	12	3	36	1345	7.0	6.9	60.6	57.3	4.2	4.0
II	Less Affected	26	3	28	892	4.6	6.1	113.8	98.3	5.2	6.0
III	Least Affected	6	1	8	385	6.3	7.7	26.4	24.8	1.7	1.9
IV	Not Affected	43	-	-	-	4.0	4.0	116.6	105.2	4.7	4.2
Total deaths	87	7	72	2632	5.0	5.6	317.4	285.6	15.8	16.1	
Life Table deaths					4.0	4.0			12.7	11.4	
Excess deaths in 1943					1.0	1.6			3.1	4.7	